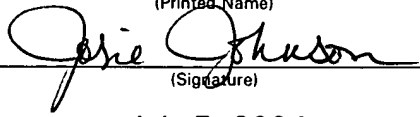




IPW AF/3727
Atty. Dkt. No. 029539/0101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dan Molander
Title: A STACKABLE PLASTIC
BOX BLANK AND METHOD
OF FORMING SAME
Appl. No.: 09/687,654
Filing Date: 10/13/2000
Examiner: Stephen J. Castellano
Art Unit: 3727

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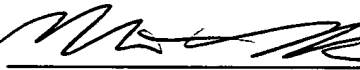
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Respectfully submitted,

Date July 7, 2004

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**BOARD OF PATENT APPEALS AND INTERFERENCES
IN THE U.S. PATENT AND TRADEMARK OFFICE**

In re Application of: Dan Molander
Serial No.: 09/687,654
Filed: October 13, 2000
Group: 3727
For: A STACKABLE PLASTIC
BOX BLANK AND
METHOD OF FORMING
SAME

Examiner: Stephen J. Castellano

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

<p>CERTIFICATE OF MAILING</p> <p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the date below.</p> <p><u>Jorie Johnson</u> (Printed Name)</p> <p><u>Jorie Johnson</u> (Signature)</p> <p><u>July 7, 2004</u> (Date of Deposit)</p>
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APPELLANT'S BRIEF

Real Party in Interest

Recopac AB is the real party in interest by virtue of an assignment of the above-referenced patent application from Mouldex Plast AB to Recopac AB. The assignment of the application was recorded in the Patent and Trademark Office at Reel 011737, Frame 0263. The parent application was previously assigned to Mouldex Plast AB by the inventor, Dan Molander, and was recorded in the Patent and Trademark Office at Reel 010443, Frame 0910.

Related Appeals and Interferences

No other appeals or interferences are known to the Appellant, the inventor, or the Appellant's legal representatives which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

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Status of Claims

Claims 1-11 and 13-17 are pending in the above-referenced patent application. The rejection of Claims 1-11 and 13-17 is therefore being appealed.

Status of Amendments

No amendment was submitted after the Final Office Action of December 23, 2003.

Summary of Invention

The present application relates to a box blank. The box blank is formed from a plastics material and comprises a plurality of hinge elements connecting a plurality of panels which form the sides of the box. The hinge elements and the panels are formed from different plastics materials.

Issues

The first issue presented in this appeal is whether the invention as claimed in Claims 1, 3, 5, 8, 9, and 16 is anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,292,060 issued to Focke et al. (Focke).

The second issue presented in this appeal is whether the invention as claimed in Claims 1-3, 6, 8 and 9 is anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 4,896,787 issued to Delamour et al. (Delamour).

The third issue presented in this appeal is whether the invention as claimed in Claims 2, 3, 7, 11, 13, 14, and 17, is obvious under 35 U.S.C. § 103 over Focke in view of Delamour and further in view of U.S. Patent No. 3,445,052 issued to Lewallen (Lewallen).

The fourth issue presented in this appeal is whether the invention as claimed in Claims 2, 4, 6, 10, and 15 is obvious under 35 U.S.C. § 103 over Focke in view of Lewallen and Delamour and further in view of U.S. Pat. No. 4,407,427 issued to Reuter (Reuter), U.S. Pat. No. 5,386,817

issued to Jones (Jones), U.S. Pat. No. 4,886,049 issued to Darras (Darras), and U.S. Pat. No. 4,387,720 issued to Miller (Miller).

The fifth issue presented in this appeal is whether the invention as claimed in Claims 2, 4, 6, 10, 11, and 14-17 is obvious under 35 U.S.C. § 103 over Focke in view of Lewallen and Delamour and further in view of Reuter, Jones, Darras, and Miller.

Grouping of Claims

Claims 1, 3, 5, 8, 9, and 16 stand and fall as a group with regard to Issue One.

Claims 1-3, 6, 8 and 9 stand and fall as a group with regard to Issue Two

Claims 2, 3, 7, 11, 13, 14, and 17 stand and fall as a group with regard to Issue Three.

Claims 2, 4, 6, 10, and 15 stand and fall as a group with regard to Issue Four.

Claims 2, 4, 6, 10, 11 and 14-17 stand and fall as a group with regard to Issue Five.

DISCUSSION

I. Background

The present application was filed as a Divisional Application of U.S. Pat. App. No. 09/403,580 (now U.S. Pat. No. 6,416,701) which claimed priority to PCT/SG97/00039.

The Patent Office issued a First Office Action on June 7, 2001 rejecting Claims 1-13. Claims 1-3, 6-9, 12, and 13 were rejected under 35 U.S.C. §102 as being anticipated by U.S. Pat. No. 4,010,865 issued to Wilgus (Wilgus). In addition, Claims 1 and 2 were rejected under 35 U.S.C. § 103 as being obvious over U.S. Pat. No. 3,376,994 issued to Flinn Jr. (Flinn). Claims 4-6 and 8-11 were rejected under §103 as being obvious over Flinn or Wilgus in view of U.S. Pat. No. 4,407,427 issued to Reuter (Reuter). In addition, the Examiner rejected the claims under 35 U.S.C. § 112, second paragraph. The Examiner stated that the claim term “toughness” is the same as “rigidity”; thus the Examiner took the position that Claim 2 was self contradictory as the

invention was defined as having hinge elements with “greater toughness but less rigidity than the plastics material forming the panels.”

In an Amendment and Reply dated December 7, 2001, Applicant responded to the June 7th Office Action. Applicant amended independent Claims 1 and 9 and added Claims 14-17 to the application. Applicant's amendment further clarified the invention of Claims 1-13 as having the panels and hinge elements fused together. Applicant submitted an argument in the Reply providing evidence of the plain meaning of the terms “toughness” and “rigid” contrary to the Examiner's contention. Applicant pointed out that, in contrast to the definition assigned to the two terms by the Examiner, dictionaries recognize a distinction between the two, a distinction clear from the Applicant's disclosure.

The Patent Office issued a Final Office Action on February 8, 2002. The Examiner ignored the Applicant's arguments regarding the meaning of the terms “toughness” and “rigid”, again rejecting the claims based on the perceived contradiction in Claim 2. The Examiner rejected Claims 1-3, 7-9, and 11-14 under 35 U.S.C. § 102(b) as being anticipated by Brown. In addition, the Examiner rejected Claims 4-6, 10, and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Reuter. In fact, the Examiner stated that the “hinge element plastic [of Brown] has greater toughness and less rigidity than the panel plastic.”¹ The Examiner also, for the first time, took the view that Claim 1 was indefinite under 35 U.S.C. § 112, second

¹ As Applicant pointed out in the first Appeal Brief of October 2002, the Examiner continued to take wholly contradictory positions and to exhibit a lack of understanding of the invention. In the February 8, 2002 Office Action, the Examiner rejected claim 2 under 35 U.S.C. § 112 on the grounds that, in the Examiner's opinion, the term “toughness is exactly the same as rigidity.” The Examiner then proceeded to reject the same claim under 35 U.S.C. § 102(b), asserting without support that “[t]he hinge element plastic has greater toughness and less rigidity than the panel plastic.” Similar rejections were also made in the June 7, 2001 Office Action. Although the rejection under 35 U.S.C. § 112 was ultimately withdrawn, these irreconcilable and wholly inconsistent positions taken by the Examiner in the same Office Actions demonstrate a fundamental lack of understanding of the invention described in claim 2.

paragraph due to the phrase “the hinge elements and panels being formed from different plastics materials.” The Examiner stated that this phrase has more than one meaning, i.e., that the hinge elements are formed from different plastic material than the panels or that the hinge elements are formed from different plastics materials and the panels are also formed of different plastics materials.

On May 8, 2003 Applicant submitted an Amendment and Reply along with a Request for Continued Examination. Applicant pointed out that the Examiner ignored Applicant's comments regarding the terms “toughness” and “rigid” and again repeated the arguments regarding the plain meaning of the terms. In addition, Applicant amended the claims to further clarify that the claimed invention related to a “unitary” box blank formed as a singular object as opposed to the cited art which was formed from individual components. In response to this rejection, the Applicant amended the claim to clarify that “the hinge elements being formed from a different plastics material than the panels.”

In response to the Request for Continued Examination and Reply, the Patent Office issued a Final Office Action June 20, 2002. The Examiner again rejected Claims 1-3, 7-9, and 11-14 under 35 U.S.C. § 102. In addition, Claims 4-6, 10, and 15-17 were rejected under 35 U.S.C. 103 as being unpatentable over Brown in view of Reuter.

Applicant filed an appeal with the Board of Patent Appeals and Interferences on October 10, 2002. Applicant set forth in the Appeal Brief the same arguments which had gone unaddressed by the Examiner.

In response to Applicant's Appeal Brief, the Examiner reopened prosecution of the application in a December 10, 2002 Office Action. The Examiner again did not address any of Applicant's arguments, but rather issued an entirely new series of rejections. The Examiner

rejected the claims under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner based the various §112 rejections on the limitation “the hinge elements being formed from different plastics material than the panels” which was added by Applicant’s amendment of December 2001 in response to Examiner’s misunderstanding of the original claim language. The Examiner indicated that there was no basis for this limitation in the application as filed; thus, the Examiner issued a new matter rejection. Additionally, the Examiner continued the prior rejections of Claims 1-3, 7-9, and 11-14 under 35 U.S.C. § 102 as being anticipated by a new reference, Lewallen. In addition, the Examiner rejected Claims 1-2, 6, 8, 9, and 12 as being clearly anticipated by new reference Delamour. Claims 1-3, 7-9, and 11-14 were again rejected as being anticipated by Brown. The Examiner then rejected the claims as obvious over various combinations of newly cited art. Claims 2, 4, 6, 10, and 15 were rejected as being obvious over Lewallen in view of Reuter, Jones, Darras, Roe, and Miller. Claims 2, 4, 6, 10, 11, and 14-17 were rejected as being obvious over Delamour in view of Lewallen, Reuter, Jones, Darras, Roe, and Miller. Claims 4-6, 10, and 15-17 under 35 U.S.C. 103 as being unpatentable over Brown in view of Reuter, Jones, Darras, Roe, and Miller. Despite these entirely new references and new grounds for rejection being issued in response to the Applicant’s appeal, the Examiner indicated that the office action was final. The Examiner again did not comment on any of the Applicant’s prior arguments including those directed to rejections which the Examiner repeated in this office action.

Applicant contacted the Examiner to clarify that the office action was final. In a telephone message of May 7, 2003, the Examiner acknowledged that the office action should not have been made final and would not be treated as final.

Applicant filed another Reply and Amendment on May 12, 2003 in response to the Office Action of December 2002 which reopened prosecution. Initially, Applicant directed the Examiner to page 4, lines 4-20 of the originally filed specification. Applicant stated that this portion of the specification clearly and unambiguously states that the net is formed from a rubber modified polypropylene, while the panels are formed from a copolymer polypropylene with a higher melt index than the rubber-modified polypropylene of the net. The fact that the plastics materials forming the net has a different melt index than the plastics material forming the panels unambiguously would be understood by one of ordinary skill in the art to mean that the net and the panels are formed from different plastics materials. In response to the multitude of new art cited by the Examiner in the fourth office action, the Applicant amended the claims to describe a net of hinge elements of a first plastics material and a plurality of panels of a second plastics material, with the panels being located in spaces between and fused to the surrounding hinge elements of the net. In addition, Applicant noted that Roe was issued five months after the foreign priority date of the application.

Yet another Final Office Action was issued July 11, 2003. Initially, the Examiner, for the first time in the fifth office action stated that it was the Examiner's position that the Applicant had not properly claimed priority. The Examiner apparently ignored the Applicant's clear claim in the specification of the application, instead pointing to the typographical error in the declaration which states "nil" in the box labeled "priority claimed." In addition, the Examiner gave no mention of the fact that the application was a divisional of parent U.S. Pat. No. 6,416,701, to which priority was properly claimed and thus the application is entitled to the priority date of the 1997 application. The Examiner rejected Claims 1, 3, 5, 8, 9, 12, and 16 under 35 U.S.C. §102(b) as being anticipated by Focke et al. (U.S. Pat. No. 5,292,060). Claims

1-3, 6, 8, 9, and 12 were rejected under 35 U.S.C. § 102(b) as being anticipated by Delamour et al (U.S. Pat. No. 4,896,787). The Examiner rejected claims 2, 3, 7, 11, 13, 14, and 17 under 35 U.S.C. §103(a) as being obvious over Focke in view of Delamour and further in view of Lewallen (U.S. Pat. No. 3,445,052). Claims 2, 4, 6, 10, and 15 were also rejected under §103(a) as obvious over Focke in view of Lewallen and Delamour in view of Reuter (U.S. Pat. No. 4,407,427), Jones (U.S. Pat. No. 5,386,817), Darras (U.S. Pat. No. 4,886,049), and Miller (U.S. Pat. No. 4,387,720). Claims 2, 4, 6, 10, 11, and 14-17 are rejected under §103(a) as being obvious over Delamour in view of Lewallen, Reuter, Jones, Darras, and Miller. Examiner's only comment regarding Applicant's prior arguments was to state that "Applicant's statement that Delamour uses separate hinge elements (exclusively) doesn't seem to be based upon anything specific within the disclosure."²

Applicant filed a Request for Continued Examination November 10, 2003, along with an Amendment and Reply to the July 11, 2003 Office Action. Applicant again amended the claims to more clearly define the invention. Specifically, the hinge elements were further defined as being interconnected. Also, the amended claims define the hinge elements as "including first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between said edge portions." Applicant specifically highlighted Focke, figures 2 and 3 and Delamour figure 6 as illustrating that the primary references lack a net of interconnected hinge elements as claimed.

The Examiner issued a sixth Office Action on December 23, 2003, from which the Applicant is currently appealing. The Examiner made this first office action, following the RCE

² Applicant is unsure how he is to positively show that Delamour does not disclose a net of interconnected hinge elements. The Examiner's rationale typifies the behavior that had occurred throughout the course of prosecution.

of November 10, a final office action. The Examiner rejected Claims 1, 3, 5, 8, 9, and 16 under 35 U.S.C. §102(b) as being anticipated by Focke et al. (U.S. Pat. No. 5,292,060). Claims 1-3, 6, 8, and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by Delamour et al (U.S. Pat. No. 4,896,787). The Examiner rejected claims 2, 3, 7, 11, 13, 14, and 17 under 35 U.S.C. §103(a) as being obvious over Focke in view of Delamour and further in view of Lewallen. Claims 2, 4, 6, 10, and 15 were also rejected under §103(a) as obvious over Focke in view of Lewallen and Delamour in view of Reuter, Jones, Darras, and Miller. Claims 2, 4, 6, 10, 11, and 14-17 are rejected under §103(a) as being obvious over Delamour in view of Lewallen, Reuter, Jones, Darras, and Miller.

II. The Examiner Has Not Shown *Prima Facie* Anticipation of Claims 1, 3, 5, 8, 9, and 16 by Focke et al.

The Examiner has not made an adequate showing that claims 1, 3, 5, 8, 9, and 16 are anticipated by U.S. Patent No. to Focke under 35 U.S.C. § 102(b). More particularly, the Examiner has failed to cite any reference, including Focke, that discloses a box blank comprising a net of interconnected hinge elements of a first plastics material and a plurality of panels of a second plastics material wherein each hinge element includes a first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between said edge portions.

For a prior art reference to anticipate the claim of a patent, the reference must disclose each and every limitation of a claimed invention. *See Apple Computer, Inc. v. Articulate Systems, Inc.*, 234 F.3d 14, 20 (Fed. Cir. 2000). To make a *prima facie* case of anticipation, the Examiner must show that a reference contains a disclosure which is specific as to every element of the claims at issue. *See, e.g., Ex parte Jochen Wagner and Helmut Wiss*, 2001 WL 1048474

(B. Pat. App & Interf. 2001), *In re Wilder*, 57 C.C.P.A. 1314, 1319, 429 F.2d 447, 451 (C.C.P.A. 1970). In this case, Focke does not disclose every limitation of the Appellant's invention.

Focke teaches a reusable and largely recyclable folding container. The side walls made of plastic are designed with hinge strips, consisting of the same or a similar material, for the connection of said side walls. In an alternative design, one part of the folding container consists of paperboard and serves for receiving smaller packs, whilst another part, made of plastic as described previously, is designed with hinge strips and is therefore reusable. Focke does not teach a net of interconnected hinge elements wherein each hinge element includes a first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between said edge portions.

For all of the above reasons, the rejection of claims 1, 3, 5, 8, 9, and 16 should be overturned.

III. The Examiner Has Not Shown Prima Facie Anticipation of claims 1-3, 6, 8 and 9 by Delamour et al.

The Examiner has not made an adequate showing that claims 1, 3, 5, 8, 9, and 16 are anticipated by U.S. Patent No. to Focke under 35 U.S.C. § 102(b). More particularly, the Examiner has failed to cite any reference, including Delamour, that discloses a box blank having a net of interconnected hinge elements wherein each hinge element includes a first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between said edge portions.

Delamour discloses a method and system for coupling "male" and "female" elements together by using a hinge with resilient properties. The references discloses that the hinge can be formed from a flexible material such as an elastomer containing butadiene and styrene. Additionally, the patent discloses that the individual elements may be "welded" together.

Delamour does not disclose a net of interconnected hinge elements. Figure 6 of Delamour shows that the hinges are not continuous as in the present Application. Rather the hinge elements of Delamour are intermittent, having ends at each corner of the box, which ends do not interconnect with the other hinges. Thus, the hinges of Delamour are not interconnected as claimed in the present Application.

For all of the above reasons, the rejection of claims 1, 3, 5, 8, 9, and 16 should be overturned.

IV. The Examiner Has Not Shown *Prima Facie* Obviousness of 2, 3, 7, 11, 13, 14, and 17 over Focke in view of Delamour and further in view of Lewallen.

The Examiner has not made an adequate showing that claims 2, 3, 7, 11, 13, 14, and 17 are obvious over Focke in view of Delamour and further in view of Lewallen. More particularly, the Examiner has failed to cite any reference that discloses a box blank having a net of interconnected hinge elements of a first plastics material and a plurality of panels of a second plastics material for forming sides of a box and having hinge elements which include first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between the edge portions, nor has the Examiner demonstrated any motivation to combine the teachings of Focke, Delamour, and Lewallen.

In *In re Rijckaert*, 9 F.3d 1531, 1532, (Fed. Cir. 1993), the Federal Circuit outlined the burden on the PTO as follows:

In rejecting claims under 35 U.S.C. 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.* "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 782, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir.

1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 U.S.P.Q. 143, 147 (CCPA 1976)). If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reasonable suggestion or motivation to modify the prior art reference or to combine reference teachings. Second, there must be a reasonable expectation of success of achieving the desired goals. Finally, the prior art references when combined must fairly and reasonably teach all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the Appellant's disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

The Federal Circuit stated that the PTO can satisfy its burden of establishing a *prima facie* case of obviousness only by showing some objective teaching in the prior art, or that knowledge generally available to one of ordinary skill in the art, would lead that individual to combine the relevant teachings of the references. *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992). However, one cannot use hindsight reconstruction to pick and choose among disclosures in the prior art to create the claimed invention. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

The Examiner has rejected claims 2, 3, 7, 11, 13, 14, and 17 under 35 U.S.C. § 103(a), as being unpatentable over Focke in view of Delamour and further in view of Lewallen. The Examiner has asserted that the Focke reference discloses all of the features of these claims with the exception of the hinge elements being formed of a first plastics material having a greater toughness but less rigidity than the second plastics material forming the panels.

As previously discussed above, neither Focke nor Delamour teach a box blank having an interconnected net of hinges. Neither Focke nor Delamour disclose that the hinges should be interconnected as claimed in the present Application.

Lewallen teaches a hinged laminate comprising three layers—a hinge-forming core layer of thermoplastic material, a nonhinge-forming layer of foamed thermoplastic, and a non-hinge-forming wear-resistant skin layer bonded to the foamed layer. Lewallen does not disclose a net of interconnected hinge elements of a first plastics material and a plurality of panels of a second plastics material wherein each hinge element includes first and second edge portions that are encapsulated by and fuse to adjacent panels and a hinge portion located between said edge portions. Thus, even in combination with Focke and Delamour, an interconnected net of hinges is not disclosed. Furthermore, neither Lewallen nor any of the cited art teaches the use of a net of plastics of greater toughness but less rigidity than the plastics of the panel. In addition, no motivation to modify known box blanks in such as manner has been shown. Rather, the Examiner is improperly using the Applicants' own teachings as a roadmap.

For these reasons, it would not have been obvious to one of ordinary skill in the art to combine the Focke, Delamour, and Lewallen references in the manner asserted by the Examiner. The Examiner has provided no support or motivation to modify the combined teachings of Focke, Delamour, and Lewallen. The Examiner has not cited to any portion of those references which teaches the use of a net of plastics of greater toughness but less rigidity than the plastics of the panel. Rather, the Examiner utilizes the Applicant's own disclosure as a roadmap to pick and choose prior art references that would not otherwise have been combined.

For all of the above reasons, the rejection of claims 1, 3-5, 7-9 and 11 should be overturned.

V. **The Examiner Has Not Shown *Prima Facie* Obviousness of Claims 2, 4, 6, 10, and 15 over Focke or Focke in view of Lewallen and Delamour and further in view of Reuter, Jones, Darras, and Miller.**

The Examiner has not made an adequate showing that claims 2, 4, 6, 10, and 15 are obvious under 35 U.S.C. § 103(a), as being unpatentable over Focke or Focke in view of Lewallen and Delamour and further in view of Reuter, Jones, Darras, and Miller. For all these reasons, Appellant submits that claims 2, 4, 6, 10, and 15 are patentable over the prior art cited by the Examiner.

The Examiner has stated that Focke or Focke in view of Delamour and Lewallen discloses the invention as claimed except for the materials of rubber-modified polyethylene and rubber-modified polypropylene. As discussed above, Focke, Delamour and Lewallen, even in combination, do not teach all of the claimed elements except for the materials of rubber modified polyethylene and rubber modified polypropylene.

Reuter teaches a homogeneous, one piece container cover of stiff but flexible material including two or more cover portions interconnected by integral hinges. The hinges include parallel ridge and groove portions extending across the cover but terminating short of the periphery thereof, and nonridged, preferably generally flat hinge portions extending from the ridges to the periphery of the cover. One portion of the cover is adapted to be attached to a flange around the opening of a container, and the other portion or portions can be opened by flexing the hinge portions. Reuter does not, even in combination with the other cited prior art, teach all of the limitations of the claims. Reuter does not teach a net of interconnected hinge elements wherein each hinge element includes first and second edge portions that are encapsulated by and fused to adjacent panels.

Jones discloses a protective covering for a medical instrument, such as an endoscope. The covering includes an elongated hollow sheath having a wall of flexible material. The sheath is substantially gas and water impervious. The sheath further includes auxiliary access tubes associated with the sheath for providing a variety of functions, such as instrument manipulation, and fluid removal. The distal end of the sheath is provided with a cap having an optically clear window to allow the lens portion of the medical instrument to operate. Jones does not, even in combination with the other cited prior art, teach all of the limitations of the claims. Jones does not teach a net of interconnected hinge elements wherein each hinge element includes first and second edge portions that are encapsulated by and fused to adjacent panels.

Darras discloses a medical instrument cover having an elongated, generally tubular sheath of an elastomeric material, open at both ends, configured to fit on an endoscope and defining an interior surface. A filament is attached to the interior surface of the sheath and functions to separate the sheath in an elongate direction. In this manner, the sheath is easily removed from the medical instrument which it is covering. Darras does not, even in combination with the other cited prior art, teach all of the limitations of the claims. Darras does not teach a net of interconnected hinge elements wherein each hinge element includes first and second edge portions that are encapsulated by and fused to adjacent panels.

Miller discloses a transducer that is utilized to transmit pulses of alternating pressure waves into the body of a patient and produce signals in response to reflections from the body. The lens is comprised of a first lens element having a concave face facing the crystals and a second lens element filling the space between. Miller does not, even in combination with the other cited prior art, teach all of the limitations of the claims. Miller does not teach a net of

interconnected hinge elements wherein each hinge element includes a first and second edge portions that are encapsulated by and fused to adjacent panels.

The Examiner has provided no support or motivation to modify the combined teachings of Focke, Delamour, and Lewallen with Reuter, Jones, Darras, or Miller. This rejection constitutes seven total references which nevertheless do not disclose the claimed invention. The Examiner has failed to cite any reference that discloses a box blank having a net of interconnected hinge elements of a first plastics material and a plurality of panels of a second plastics material for forming sides of a box and having hinge elements which include first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between the edge portions, nor has the Examiner demonstrated any motivation to combine the teachings of Focke, Delamour, Lewallen, Reuter, Jones, Darras, and Miller. More particularly, the Examiner has not cited to any portion of those references which teaches the use of a net of plastics of greater toughness but less rigidity than the plastics of the panel.

Reuter, on the other hand, is directed to a container cover. *Reuter* does not disclose any sort of box blank at all, nor does Reuter teach the use of different plastics materials for the panels and the hinge elements. In the case of Reuter, not only does the reference not teach the use of different plastics materials, it in fact teaches away from this concept. In particular, column 3, lines 35-44, specifically describes the entire cover as being “injection molded from rubber-modified polypropylene” and that one advantage of the invention is the manufacture of “a single, homogenous integral plastic cover.”

For all of the above reasons, the rejection of claims 2, 4, 6, 10, and 15 should be overturned.

VI. The Examiner Has Not Shown *Prima Facie* Obviousness of Claims 2, 4, 6, 10, 11, and 14-17 over Focke in view of Lewallen and Delamour and further in view of Reuter, Jones, Darras, and Miller.

The Examiner has not made an adequate showing that claims 2, 4, 6, 10, and 15 are obvious under 35 U.S.C. § 103(a), as being unpatentable over Focke in view of Lewallen and Delamour and further in view of Reuter, Jones, Darras, and Miller. For all these reasons, Appellant submits that claims 2, 4, 6, 10, and 15 are patentable over the prior art cited by the Examiner.

As previously discussed, Delamour does not disclose the invention except for the materials of rubber modified polypropylene, polypropylene, polyethylene, and rubber modified polyethylene for the hinge element and polypropylene and polyethylene for panels. Delamour does not disclose a net of interconnected hinges. In addition, Reuter Jones, Darras, and Miller do not teach the use of these materials. Furthermore, no motivation to combine the numerous references exists.

For all of the above reasons, the rejection of claims 2, 4, 6, 10, 11, and 14-17 should be overturned.

CONCLUSION

The Examiner has not made an adequate showing that claims 1, 3, 5, 8, 9, and 16 are anticipated by U.S. Patent No. to Focke under 35 U.S.C. § 102(b).

The Examiner has not made an adequate showing that claims 1, 3, 5, 8, 9, and 16 are anticipated by U.S. Patent No. to Focke under 35 U.S.C. § 102(b).

The Examiner has not made an adequate showing that claims 2, 3, 7, 11, 13, 14, and 17 are obvious over Focke in view of Delamour and further in view of Lewallen.

The Examiner has not made an adequate showing that claims 2, 4, 6, 10, and 15 are obvious under 35 U.S.C. § 103(a), as being unpatentable over Focke or Focke in view of Lewallen and Delamour and further in view of Reuter, Jones, Darras, and Miller.

The Examiner has not made an adequate showing that claims 2, 4, 6, 10, and 15 are obvious under 35 U.S.C. § 103(a), as being unpatentable over Focke in view of Lewallen and Delamour and further in view of Reuter, Jones, Darras, and Miller.

The cited prior art, either alone or in combination, fails to anticipate or teach the box blank as claimed in the current application. Furthermore, there is no motivation or suggestion to combine the cited prior art references. Finally, the problem, its solution, and the benefits identified in the present application are absent from the prior art teaching, further diminishing any motivation for combining the references absent the use of hindsight.

The final rejections of claims 1-11 and 13-17 should therefore be reversed, and these claims allowed.

Pursuant to 37 C.F.R. 1.17(c), a check in the amount of \$165.00 is enclosed to cover the filing fee for a brief in support of appeal for a small entity. Any deficiency may be deducted from Deposit Account 06-1450. This Appeal Brief is submitted in triplicate.

Respectfully submitted,

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Appendix

A box blank formed from a plastics material and comprising a net of interconnected hinge elements of a first plastics material and a plurality of panels of a second plastics material for forming sides of a box, the panels being located in spaces between surrounding hinge elements of the net, and each hinge element including first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between said edge portions.

2. A blank as claimed in Claim 1 wherein the net of hinge elements is formed from a first plastics material having greater toughness but less rigidity than the second plastics material forming the panels.
3. A blank as claimed in Claim 1 wherein the net of hinge elements and the panels are formed from plastics materials belonging to the same family of compounds.
4. A blank as claimed in Claim 1 wherein the net of hinge elements is formed from rubber-modified polypropylene.
5. A blank as claimed in Claim 1 wherein the panels are formed from polypropylene.
6. A blank as claimed in Claim 1 wherein the net of hinge elements is formed from a plastics material having a melt index less than the plastics material from which the panels are formed.
7. A blank as claimed in Claim 1 wherein the hinge elements include a plurality of projections formed thereon.

8. A blank as claimed in Claim 1 wherein the panels include structural panels for forming the sides of the box and load bearing panels, the load bearing panels being connected to the structural panels by hinge elements formed not perpendicular to the intended direction of load support provided by the load bearing panels.
9. A box blank comprising a plurality of panels connected by and fused to a net of interconnected hinge elements, each hinge element including first and second edge portions that are encapsulated by and fused to adjacent panels and a hinge portion located between said edge portions, the panels including structural panels for forming the sides of the box and load bearing panels, the load bearing panels being connected to the structural panels by hinge elements formed not perpendicular to the intended direction of load support provided by the load bearing panels, the panels and the net of hinge elements being formed from plastics.
10. A blank as claimed in Claim 9 wherein the net of hinge elements is formed from rubber-modified polyethylene.
11. A blank as claimed in Claim 1 wherein the panels are formed from polyethylene.
13. A blank as claimed in Claim 7 wherein the projections protrude from the panels.
14. The box blank of Claim 9 wherein the panels are formed from polyethylene.
15. The box blank of Claim 14, wherein the net of hinge elements is formed from rubber-modified polypropylene.

16. The box blank of Claim 9, wherein the panels and the net of hinge elements are formed from polypropylene.
17. The box blank of Claim 9, wherein the panels and the net of hinge elements are formed from polyethylene.